

### REMARKS

Claims 1-20 are pending in the application. Claims 1-20 stand rejected. Claims 1-7 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,415,596 ("Anderson") alone or if necessary in view of Jerry Korn et al., *Candy*, Time-Life Books, Alexandria, VA, pp. 8-11, 74-75, 112-113 (1981) ("Candy"). Claims 1-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,370,735 ("Rash") in view of U.S. Patent No. 6,673,380 ("Yang") and further in view of Candy. Reconsideration and allowance of claims 1-20 are respectfully requested.

1. **Claims 1-7 are allowable over Anderson alone or in view of Candy**

It is well known that soy products have undesirable odors and flavors – often characterized as grassy and/or beany flavors – which limit the wide use of such soy materials in food products. (See Specification, for example, at page 5, lines 16-23). Thus, in order for soy products to be incorporated into many products, such as confectionary-type products, the soy material must traditionally be subjected to an additional deflavoring step, which increases the cost and complexity of production.

The present invention is directed to a soy-containing confectionary product prepared by a method in which a soy-containing material is co-caramelized with a sugar to prepare a product that advantageously contains significant amounts of soy protein (i.e., at least about 5 percent soy protein) without having the off-flavors normally associated with soybeans and without requiring the use of deflavored soy material or pretreatment of the soy materials to provide the desired deflavoring effect.

Neither Anderson nor Candy, either alone or in combination, teach or suggest the soy-containing confectionary product recited in claims 1-7 in which a soy-containing material is co-caramelized with a sugar. Anderson is directed to a confectionary product in which a caramel composition surrounds a protein rich core containing a hydrophobed albumin. (See Anderson, col. 2, lines 10-16, 24-29). Anderson does not address the issue of avoiding off-flavors associated with soy protein, but rather, is concerned with the organoleptic properties, especially mouthfeel properties, associated with the high protein content. Specifically, Anderson provides:

the otherwise rubber-like and tough texture, normally associated with agglomerated particles, does not occur since the particles are separated. Further, this provision does not lead to the slimy consistency which was unavoidable in the case of eating the prior art products rich in protein, e.g. albumin. This is because the particles are hydrophobed on their surface and the usual swelling is largely prevented during the chewing process. Accordingly, the undesirable slimy consistency of the product on chewing does not occur, as opposed to that which would immediately occur in the case of the prior art products with similar high protein, e.g. albumin contents. On the basis of these superior organoleptic properties, especially during chewing, the present confectioneries are acceptable for providing the valuable proteins for human consumption, while at the same time the products provide satisfactory taste.

(Anderson, col. 2, lines 41-58.)

Further, since the protein rich core contains a high portion of albumin, Anderson teaches that the core ingredients should be heated to a temperature of *no more than 50 °C*. (Anderson, col. 4, lines 39-47.) This specifically teaches away from the present invention which requires heating the aqueous composition of soy-containing material and sugar at a temperature and for a time sufficient to caramelize at least a portion of the sugar and reduce the moisture content to less than about 30 percent to produce a caramelized composition. Moreover, given this express temperature limit provided in Anderson, there would have been no motivation to combine the teachings of Candy showing higher temperatures required for caramelization.

Since neither Anderson nor Candy, either alone or in combination, teach or suggest a soy-containing confectionary product prepared according to the claimed steps or containing at least about 5 percent soy protein without off-flavors normally associated with soybeans, independent claim 1 and depended claims 2-7 are allowable for at least this reason.

## **2. Claims 1-20 are allowable over Rash in view of Yang and Candy**

Claims 1-20 stand rejected as obvious over Rash in view of Yang and further in view of Candy. However, none of the cited references, alone or in combination, teach or suggest the soy-containing confectionary product recited in claims 1-7 or the method for preparing such a soy-containing confectionary product as recited in claims 8-20.

Furthermore, without the teachings of the Applicants' specification, there would have been no motivation to combine the teachings of Rash, Yang, and Candy as proposed in the Office Action.

As described above, claims 1-7 are directed to a soy-containing product prepared according to the claimed process, which contains at least about 5 percent soy protein without off-flavors normally associated with soybeans. Claims 8-20 are directed to the method of preparing such a soy-containing confectionary product, which involves the co-caramelization of the soy-containing material and a sugar. None of the cited references teach or suggest a confectionary product having the level of soy protein of the present invention that is made by co-caramelizing a soy-containing material and a sugar. As acknowledged in the office action, "Rash includes high levels of protein but it is no [sic] soy protein." Instead, Rash is specifically directed to the use of whey that has been processed to reduce its lactose and ash content. (See Rash, col. 2, lines 46-48.) Milk products, such as whey, are well known in the art for their desirable flavor characteristics and do not have the off-flavors associated with soy proteins.

The Office Action suggests that the 8.0% vegetable oil and 2.4% defatted soy flour identified in Example 1 of Rash may be taken together to be the soy-containing material of the present invention. However, as is well known in the art, vegetable oil does not contain protein and, therefore, does not contribute to the soy protein content of the final product. Similarly, defatted soy flour contains only about 45-50% protein. As such, Rash does not teach or suggest a product that contains at least about 5 percent soy protein as required by the present claims. At most, the product disclosed in Rash would include only about 1.2% soy protein.

The Office Action asserts that "Yang is relied upon to draw equivalent [sic] between various kinds of protein." However, Yang, like Rash, fails to teach or suggest a confectionary product that contains at least about 5 percent soy protein. Indeed, as shown in Table 1, Yang teaches that the preferred confectionary products include less than 5 percent of *any* type of protein. (See Yang, Table 1, 2-4% protein.) Thus, claims 1-20 are allowable for at least this reason. Moreover, the Examiner's assertion that the various kinds of proteins are "equivalent" is essentially meaningless at best and simply wrong at

worst. The parameter of interest in the present invention is the off-flavor associated with soy protein. Clearly soy protein, as is well known in the art, is not "equivalent" to other types of proteins; soy protein has a "beany" off-flavor. Surely the Examiner is not stating, or believes that, other types of proteins has an equivalent "beany off-flavor" like soy protein. Clearly this reasoning and rejection are improper.

Furthermore, in the absence of the Applicant's disclosure, it would not have been obvious to one of ordinary skill in the art to substitute soy protein for the whey protein used in Rash to provide a soy-based confectionary. As described above, and in the Applicant's specification, it is well known in the art that soy products have undesirable off-flavors, which limit the wide use of such soy materials in food products. (See Specification, for example, at page 5, lines 16-23). However, such off-flavors are not associated with milk products, such as those described in Rash and Yang. Thus, there would have been no motivation to combine the teachings of Rash, Yang, and Candy as proposed in the Office Action. Claims 1-20 are allowable for at least this additional reason.

Finally, the Applicants submit that the recent Supreme Court opinion of *KSR Int'l Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (2007), does not effect the allowability of the subject matter of claims 1-20. *KSR* addressed the issue of obviousness under §103(a) when the claim recites merely a combination of elements of the prior art. It is inapplicable to the present application in which the claims recite a method and a product prepared by such method that are not disclosed in a reference or combination of references.

In view of the foregoing remarks, reconsideration and allowance of claims 1-20 are respectfully requested. The Commissioner is hereby authorized to charge any which may be required in this application to Deposit Account No. 06-1135.

Respectfully submitted,  
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